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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,491	03/02/2004	Xiaorong Wang	P02082US1A	1864

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BRIDGESTONE AMERICAS HOLDING, INC.
1200 Firestone Parkway
Akron, OH 44317

EXAMINER

LE, HOA T

ART UNIT PAPER NUMBER

1773

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,491

Applicant(s)

WANG ET AL.

Examiner

H. T. Le

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 2-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Apr. & Oct. '04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 2-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2-10, “the “composition” (line 1) has no antecedent basis. The subject matter of claim 1 is “nanoparticle”.

In claim 4, the phrase “and the like” render the claim indefinite because the claim includes elements not actually disclosed (those encompassed by “the like”), thereby rendering the scope of the claim unascertainable. In addition, the phrase “as well as” also renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claims 9 and 10 are further indefinite because “nanoparticles” (plural) has no clear antecedent basis because only nanoparticle (singular) is recited in claim 1 on which these two claims depend.

Claim 9 is also confusing because it is unclear how the nanoparticles are crosslinked. Are they self-crosslinked between layers or crosslinked with each other?

In claim 11, the step of “combining” as claimed is incomplete. This is a chemical process claim, “combining” does not really recite a process step because it fails to reflect the actual chemical process that requires for the formation of the functional groups and the metal on the particles. Thus “combining” is not a proper limitation in this case.

In claim 13, it's unclear how an "alkane solvent charge" is made. Its location is also unclear. Does that charge stay in the final product? What is a solvent "charge"?

In claim 14, it's unclear what is being hydrogenated by the "hydrogenation" step.

Claim 16 suffers the same dependency of claim 4.

In claim 23, penultimate line, "nanocomposites" has no antecedent basis; and "nanoparticle" (singular) has no clear antecedent basis.


Other claims are deemed indefinite in view of their dependency upon claim 11 or 23.

Allowable Subject Matter

2. Claim 1 is allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:
None of the prior art of record, singly or in combination, teach or suggest a polymer nanoparticle having specific layered components as claimed. In addition, Applicants' most related applications, SN 10/331,841 and 10/872,731, are directed to patentably distinct subject matter. 10/331,841 does not claim a metal complexed with a functional group to form a polymer-metal nanoparticle. 10/872,731 does not the presence of a functional group between the outer layer and the complexed metal. Thus they are patentably distinct from the present application.
4. References are cited as art of interest.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


H. T. Le
Primary Examiner
Art Unit 1773